



Published in final edited form as:

J Acad Nutr Diet. 2013 May ; 113(5): 667–672. doi:10.1016/j.jand.2012.11.011.

Environmental and Individual Factors Affecting Menu Labeling Utilization: A Qualitative Research Study

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Abstract

Obesity is a significant public health concern that disproportionately affects low-income and minority populations. Recent policies mandating the posting of calories on menus in fast food chain restaurants have not proven to uniformly influence food choice. This qualitative research study uses focus groups to study individual and environmental factors affecting the usage of these menu labels among low-income, minority populations. Ten focus groups targeting low-income residents (n=105) were conducted at various community organizations throughout NYC in Spanish, English, or a combination of both languages, over a nine-month period in 2011. In late 2011 and early 2012, transcripts were coded through the process of thematic analysis using Atlas.ti for naturally emerging themes, influences, and determinants of food choice. Few used

menu labels, despite awareness. Among the themes pertaining to menu label usage, price and time constraints, confusion and lack of understanding of caloric values, as well as the priority of preference, hunger, and habitual ordering habits were most frequently cited as barriers to menu label usage. Based on the individual and external influences on food choice that often take priority over calorie consideration, a modified approach may be necessary to make menu labels more effective and user-friendly.

Keywords

Menu labeling legislation; obesity prevention; nutrition policy; food access; qualitative research

Introduction

In 2008, the New York City Department of Health and Mental Hygiene implemented a 2006 revision of the city's Health Code that requires fast food chain restaurants in New York City (NYC) with more than 15 locations nationwide to post calories for standard menu items (items which regularly appear on menus, and come from standardized recipes).¹ This policy, which premiered in NYC, was a result of recent state and national interest aimed at decreasing the alarming rates of obesity using environmental approaches. According to the most recent National Health and Nutrition Examination Survey (NHANES) data, as of 2012 obesity affects more than a third of all American adults, and more than two-thirds of American adults are overweight or obese (BMI>25).² Minority populations are disproportionately overweight or obese. The rates of obesity are almost 50% for non-Hispanic black American adults and between 38%–40% for Hispanic and Mexican-Americans adults, compared to 35% of non-Hispanic white Americans.² Obesity prevalence is also correlated with socioeconomic status; low-income populations have greater rates of obesity.³

The impact of menu labeling policy on fast food purchases is still being determined and further research in this area is needed. Quantitative research on low-income, minority populations has illustrated that the amount of calories purchased did not significantly change after the required posting of calories on menus.⁴ Other research has illustrated that individuals in low-income areas used menu labels less frequently than those in higher-income areas.⁵

As noted above, many racial and ethnic minorities and those of lower income are at high-risk for obesity. Low-income and minority neighborhoods have greater density and availability of fast food restaurants.⁶ Though studies have demonstrated some segments of the population are more knowledgeable about menu labeling and more likely to use menu labeling to make informed decisions regarding food choice,^{5, 8} few studies have examined the complex and nuanced factors affecting food choice, particularly among low-income, minority populations where rates of obesity are the highest. The goal of this qualitative study was to understand the use of menu labeling in low-income, minority populations of NYC, including visibility of menu labels, why the information was not being used regularly, and specifically, what decision-making and structural factors affect food choices at point-of-purchase.

Methods

Ten focus groups were conducted in English and Spanish by trained moderators at various locations throughout NYC in 2011. The study was approved by the New York University School of Medicine (NYUSOM) Institutional Review Board. Written informed consent was collected from all participants. Two recruitment methods were utilized. One was through Community Based Organizations (CBOs), located in low-income minority neighborhoods throughout NYC, with which the research team had existing relationships. The second method of participant recruitment was through the distribution of fliers posted in local recreation and community centers that serve mostly low-income, minority populations. Four CBOs assisted with recruitment of participants into eight focus groups (two at each site). CBO staff made announcements about an upcoming focus group during a regularly scheduled class or other activity at the site, kept track of responses, and set a date and time for the focus groups based on the availability of interested individuals. Participants in the remaining two focus groups were recruited through fliers at recreation and community centers. The office phone number of study staff was listed on each flier, and interested participants contacted study staff directly with their availability. These two focus groups were held at NYUSOM offices, on a day that worked for the majority of individuals who expressed interest in participating.

Each focus group lasted between 50 to 70 minutes, and consisted of approximately 10 individuals. Participants in focus groups held at CBO locations each received \$25, and participants in focus groups held at NYUSOM received \$20 each as well as a round trip metro card (valued at \$4.50). Since the majority of participants recruited through CBOs did not need to make an extra trip to the focus groups—as they were organized around other planned activities attended by most of our focus group participants—the organizations chose to increase the amount of the cash incentive in lieu of the metro card. Participants were eligible for the study if they were at least 18 years of age and had a familiarity with local fast food venues. The announcements made by CBO staff, or the fliers, did not specify the extent to which participants had to know fast food restaurant menus, or how often they needed to dine at these establishments in order to participate. Instead, potential participants were told that the focus groups were about how individuals make food choices for themselves and their families, and asked that those who volunteer for the focus groups do report frequenting fast food restaurants. The recruitment fliers stated: “Must be familiar with fast food restaurants in NYC.” No additional information was given so that participants did not develop preconceived notions of what would be discussed during the focus groups. Weight status was not considered during recruitment, and was not a requirement for participation.

All focus groups were led by a female moderator. Seven were conducted in English by an English-speaking moderator; the remaining three were led by a bilingual English-Spanish speaker. A co-moderator was present at each focus group. Prior to each focus group, participants completed a brief seven-question survey with demographic and fast food attendance data, which was analyzed using SPSS 16.0 (version 16.0, 2007, SPSS Inc, Chicago, IL).

A written guide was utilized during each focus group, which included prompts for moderators. While the use and awareness of menu labels in fast food restaurants was the main part of the discussion, each focus group started with an open-ended question about local food options, followed by a discussion on how participants decide to eat out versus at home. The moderators then asked where participants shop for food and what influences their decisions about what they ultimately purchase and consume, and how those with young children decide what their children eat at home and while dining out.

Focus group discussions were audio-recorded; all focus group recordings were fully transcribed and those conducted in Spanish were translated to English. ATLAS.ti qualitative data management software (ATLAS.ti, version 6.2, 2010, ATLAS.ti GmbH, Berlin, Germany) was used to code and analyze the transcripts. Over the course of several months in 2011 through 2012, all transcripts were read by three members of the study team and notes were developed on common issues that arose from the focus groups. Using the process of thematic analysis,⁷ an initial set of codes and a coding manual were developed, informed by the open-ended questions asked during the focus groups as well as the study team's initial review of the transcripts. The codes and manual, which contained a common set of criteria by which to identify and code segments of text, were developed by one primary coder and reviewed by two other members of the study team. Three members of the study team independently coded all of the transcripts and all final codes and themes were mutually agreed upon. In addition, a senior member of the study team reviewed twenty percent of all coded transcripts.

A total of 62 codes were developed and used in Atlas.ti. Of these, 32 codes pertained specifically to menu labeling in fast food restaurants. The remaining 30 codes pertained to participants' perceptions and knowledge of healthy vs. unhealthy foods, where they get their information on healthy eating, children and food choices, and cultural influences on diet (not reported here). Codes were reviewed by the entire study team to identify common themes pertaining to menu labeling, and were categorized into individual versus environmental factors. A total of nine menu labeling-specific themes were identified, and are discussed below.

Results and Discussion

A total of 105 people participated in the groups (Table 1). Most were Hispanic/Latino (68%) or African American (24%), 67% were female and 57% had children. The majority (57%) of participants had a household income of less than \$25,000 per year. The average reported number of visits to fast food restaurants was 3.2 per week. The age range of all participants was 19–87; however two focus groups were conducted at a senior center, where participants' ages ranged from 61 to 87. The mean age for all focus group participants was 46 years. Since the focus groups were open to all adults over the age of 18, the broad age range among participants was expected.

Given the nature of a focus group discussion, the researchers were not able to keep a detailed tally of individual responses by age, race, and gender within each focus group. Responses pertaining directly to menu labeling in fast food restaurants did not differ greatly

among all participants. Overall, most participants in all focus groups indicated that they noticed or had heard about menu labels in fast food restaurants, but the majority were not regularly using the calorie counts to guide their food choice. Of those who mentioned using menu labels, some indicated that they were helpful, saying “[menu label] stops me in my tracks from choosing something really bad” [Female Participant]. Others mentioned that they only use menu labels sometimes: “The only time I think about it is when I’m dieting. It’s the only time I think about calories” [Female Participant]. However, many noted barriers to, and reasons against, regularly using menu labels to guide food choice. Findings reflecting individual and environmental level factors that guide food choice at point of purchase are illustrated in Table 2.

Individual level factors

Participants noted a variety of themes that take precedence over calorie counts when making food choices, including preference for particular menu items regardless of caloric content, habitual ordering of particular items, and degree of hunger when ordering (Table 2). A number of participants indicated that there are items that they purchase regularly based on preference and without consulting the menu, therefore failing to take menu labels into account. Further, several participants noted that they often enter fast food restaurants with an appetite and are purposefully choosing items, typically more calorically dense, to satiate their hunger. Additionally, some participants noted that labels are not personally relevant because they did not understand the meaning of a calorie or the importance of calories on health outcomes. Others felt that they could easily burn off calories consumed at a fast food restaurant by engaging in physical activities.

Environmental level factors

Environmental factors also inhibited individuals from effectively using menu labels to promote healthier food choices (Table 2). The higher price of healthier food, perceived to be less calorically dense by some, was often cited as a reason for choosing lower cost food items. Results also revealed that fast-paced daily life presented a barrier to using menu labeling effectively. Similarly, participants also noted that time constraints were a main factor in frequenting a fast food restaurant, that fast food was generally more convenient, and that considering calories in these fast-paced settings was challenging. Finally, even when participants reported noticing menu labels, they illustrated confusion concerning the meaning of calories and/or the suggested daily allowance of calories. Participants cited that the presentation (font size, placement, etc.) of calories on the menus was often unclear. Similarly, the large ranges sometimes presented for menu items (i.e. combo meals could have between 500–900 calories) led some participants to doubt their accuracy.

Conclusion

To the authors’ knowledge, this is one of the first qualitative studies on menu labeling in fast food restaurants. This work is not without limitations, particularly since it is a) exploratory, b) relatively small in nature, c) limited to urban populations in one geographic area, and d) emphasizes a breadth of responses as opposed to having great depth. But, these findings underscore important potential limits of menu labeling as a population-wide obesity-

reduction strategy which deserve further examination. The study also possesses a number of strengths, including a) a diverse sample with regard to race, ethnicity, age, and gender, b) a focus on residents of low-income neighborhoods, which are known to have a high concentration of fast food restaurants, and c) a qualitative nature which allowed the researchers to explore restaurant menu labeling and other food choice-related themes in ways a quantitative study does not have the capacity to do. While the majority of menu labeling evaluations have found that posted calories are not effective at reducing the number of calories fast food patrons are purchasing, few, if any studies explore why menu labeling has not been more successful. This paper addresses that question and identifies a variety of individual barriers and external factors that could affect an individual's ability to use menu labeling. The findings also reveal that alterations to menu label presentation may improve the effectiveness of the policy. For example, menu labeling initiatives could be clarified through educational or media campaigns to enhance understanding of the relevance of calorie information and decrease the time and difficulty of food choice deliberation (i.e. symbols, color coding healthier items, making separate low-calorie menus etc.). However, this paper also identifies barriers that may be more difficult to alter, such as menu pricing, individual time constraints, and prevalence/density of high calorie fast food options.

Additional research is necessary to understand the varying contexts and conditions under which menu labels may be more readily used. But, these findings indicate that the inherent complexity and influence of several external and potentially modifiable factors may act as deterrents to the regular usage of menu labels. If this is the case, a different approach to menu labeling and additional public policies may be required.

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Table 1

Demographic Characteristics of Respondents in Focus Groups on Calorie Labeling Utilization in New York City.^{a b}

		n (%)**
Gender	Female	71 (67%)
	Male	32 (30%)
Primary race/ethnicity	Hispanic/Latino	72 (68%)
	African American	25 (24%)
	White/Caucasian	5 (5%)
	Asian	1 (1%)
	American Indian	1 (1%)
Children	Have children	60 (57%)
	Do not have children	40 (38%)
Annual household income (all sources)	<\$25,000	61 (57%)
	\$25,000–\$49,000	21 (20)%
	\$50,00–\$74,000	0%
	>\$75,000	3 (3)%
Age	Mean	46
	Range	19–87
Fast food visits per week	Mean	3.2
	Range	0–12

^a7 focus groups were held in English, 2 in Spanish, and 1 with a mix of English and Spanish

^bn = 105

**% are rounded up

Table 2

Individual and Environmental Themes Pertaining to Calorie Label Usage in NYC Fast Food Restaurants

Findings	Theme	Representative Quotes
Individual Level Factors	Preference	<p>"I'm not looking at the calories right now. I pick the food first and then look at the calories." -Female Participant</p> <p>"Who cares how many calories if you want it." -Female Participant</p> <p>"Yeah I figure, what's the point of looking at them [calories] if you're gonna eat it anyway?" -Male Participant</p>
	Habitual Ordering	<p>"Yeah, that's basically how it is. Where you going, you already know what you gonna get." -Male Participant</p> <p>"It's good to have it [calorie postings] there, don't get me wrong, but I never look at it...yeah usually I know what I'm going to get before I go...I usually get a Big Mac and some fries." -Male Participant</p> <p>"Because we're so set, knowing that when we go into that restaurant we already know basically what we want, so we ain't taking the time to go over there and read the menu because we going over there and we a little hungry, we want the fillers, so we don't even pay attention to the calories." -Male Participant</p>
	Degree of Hunger	<p>"When we go to a restaurant we do not see either calories nor anything but we know that we are hungry and that we want to eat." -Female Participant</p> <p>"I'm being honest, I notice the calories, but if I'm really hungry, I go in there and say you know what, I'm hungry gimme that beef and potata, you know I'm looking for something to fill me. I'm not going to order a...a... one taco roll and knowing that's not gonna do it." -Female Participant</p>
	Personal Relevance and Meaning	<p>"...the harm we actually doing to ourselves but, I guess it's really not that important." -Female Participant</p> <p>"It's like when you look at it [the calories], if you already have a taste for it, you're just go-oh I didn't know that. That's interesting. Let me get a number...and you don't think about it anymore. It's just the way they have it set up" -Female Participant</p> <p>"We are...the only two females [here] and we are highly embarrassed, we have no idea [how many calories you should have a day]." -Female Participant</p> <p>"You might, you know, check the calories out, see how much it has...but you're not in your head thinking about, oh I have this much left in the day you know to eat." -Male Participant</p>
	Anticipate Burning off Calories Later	<p>"That's how I think too, it doesn't really effect what I eat because I'll say, oh ok I'll just run it off this week, or in my sleep I'll burn the calories." -Female Participant</p> <p>"I look at it this way, you look at those numbers [calories], you get scared off, but if you think about it, let's say you eat that, just don't eat anything else with the same amount of calories in the same day. You could still, if you exercise or you could do anything like that, you could burn the calories off. If you eat two Whoppers though...." -Female Participant</p>
Environmental Level Factors	Price	<p>"Sometimes we look at it [calories], but a lot of our choices are based on what we can afford versus like what is healthier." -Female Participant</p> <p>"Yeah, exactly. You'll get grilled chicken, not fried. And then you don't have enough money to buy that grilled chicken, then you stuck with the dollar menu." -Female Participant</p> <p>"I see it as, the stuff that has the most calories is the cheapest." -Female Participant</p>
	Time	<p>"I mean you think about it but it's hard to actually sit around and count calories (others agree) when you're trying to get lunch, if you're working..." -Female Participant</p> <p>"Lunch hour ain't but an hour, it took 15 minutes to get to it." -Male Participant</p>

Findings	Theme	Representative Quotes
		"Fast food, like people just such in a rush and they just get whatever they want to just fill themselves and bounce" -Male Participant
	Convenience	"It's amazing how I hear stories-single parents, I mean they have so much at their plate at the end of the day its just what, considering we live in a low-income neighborhood, we still go to whatever's easier. Even if you spend the last few dollars. Because I used to be like that." -Female Participant "It's a convenience, that's the whole point of the fast food thing. Convenience, fast food." -Male Participant
	Confusion/Unclear	"...they put a dash...between the calories, so you don't really know what you're getting." -Female Participant "You know they should make the calories bigger." -Female Participant "It's [the calorie labels are] not really accurate." -Male Participant